

ProTx-III

Chemical Properties

CAS No. :

Formula: C162H246N52O43S6

Molecular Weight: 3802.4

Keep away from moisture

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.

Biological Description

Description	ProTx-III, a spider venom peptide derived from the Peruvian green velvet tarantula, functions as a selective and potent inhibitor of the voltage-gated sodium channel Na _v 1.7, exhibiting an IC ₅₀ of 2.1 nM. Characterized by its inhibitor cystine knot motif (ICK), ProTx-III can attenuate the pain response and is applicable in research on chronic pain, epilepsy, and arrhythmia [1].
Targets(IC50)	Sodium Channel
In vitro	Natural, recombinant, and synthetic C-terminal (acid and amide) forms of ProTx-III exhibit IC ₅₀ values for the inhibition of hNav1.7 at 2.1, 9.5, 11.5, and 2.5 nM, respectively [1]. ProTx-III suppresses hNav1.7 without significantly altering the voltage dependency of its activation or inactivation [1].
In vivo	ProTx-III (0.01-1 μM; intraplantar injection) reversibly mitigated spontaneous pain in a mouse model induced by intraplantar OD1 injection, demonstrating its analgesic properties [1].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.263 mL	1.315 mL	2.6299 mL
5 mM	0.0526 mL	0.263 mL	0.526 mL
10 mM	0.0263 mL	0.1315 mL	0.263 mL
50 mM	0.0053 mL	0.0263 mL	0.0526 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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